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PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

File Holder Mechanism made of Plastics

- We, LOUIS LEITZ KOMMANDITGESELLSCHAFT, a German company organized under the laws of Germany, of 64 Siemensstrasse, 7 Stuttgart-Feuerbach, Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- 10 This invention relates to file holder mechanism consisting entirely of plastics for filing loose documents, into which holes have been punched, on fixed file holding pins with which pivotably deflectable file holding pins cooperate.
- 15 In a correspondence file holder known in the art, metal file holding pins are anchored in a baseplate consisting of plastics and they are adapted to cooperate with the shanks of a swivelling bail pivoted in forked bearing brackets attached to the baseplate. The bail is retained in a closing position by a metal leaf spring fixed in a slot in the baseplate and bearing with its free end on a cam-shaped or offset part of the cross rail of the bail which pivots in the bearings.
- 20 A ring mechanism which comprises metal as well as plastics components is also known in the art in which cooperating file holding elements roughly in the form of half rings are formed integrally with longitudinally obliquely adjacent plastics carrier rails which are resiliently suspended in a metal casing in the manner of tipping levers. The closing pressure acting on the two carrier rails is applied to them by the metal casing.
- 30 In these known arrangements the closing pressure is applied to the rails which carry the file holding elements by a special metal spring element. Such filing mechanisms are expensive because of the cost of production of their components and their high cost of assembly.
- 40 In contradistinction thereto the file holder mechanism proposed by the present invention comprises a baseplate carrying a bearing and fixed pins for holding the documents, and movable pins carried on a pivot shaft in the bearing and adapted to co-operate with the respective fixed pins, wherein the bearing and the shaft present co-operating surfaces to each other to locate the shaft alternately in a closed position in which the ends of the movable pins abut upon the ends of the respective fixed pins and an open position in which the movable pins are spaced by withdrawal from the fixed pins, and the bearing is formed so that it holds the shaft in the closed and open positions by resilient pressure. Thus, only two plastic mouldings which have a certain degree of inherent elasticity and which are arrestable in both the open and closed positions of the file holding pins are required, there being no need for a special metal spring element.
- 50 The two mouldings are preferably injection mouldings and the fixed and movable file holding pins preferably have a T-section for imparting rigidity and flexural strength to the same. It is also preferred that the respective lengths of the fixed and movable pins are such that, in the closed position, the respective ends abut under pressure.
- 60 The filing mechanism is affixed in conventional manner to the back or rear cover of a correspondence file holder.
- 70 Preferably the shaft is located in the closed and open positions by mutually inclined flat surfaces formed on the bearing and which co-operate with surfaces formed on the shaft and the shaft is formed with mutually inclined flat surfaces for co-operation in the closed and open positions with the flat surfaces formed on the bearing.
- 80 Conveniently a portion of the shaft periphery engaging the bearing in the full range of movement therein lies on an arc of a circle. The shaft may be of a cross-section such that the shaft has resilience on the lateral direction and accordingly may be substantially C-shape in cross-section.
- 90 In order to permit insertion of the pivot

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shaft into the bearing when the mechanism is being assembled, the bearing may have a lateral opening the width of which is substantially equal to the shortest distance between parallel planes containing two opposite extremities of the cross-section of the pivot shaft.

For manipulating the pivot shaft the latter may conveniently be integrally formed at each end with a manipulating lever.

The following is a description, by way of example, of a filing mechanism constructed in accordance with the present invention, reference being made to the accompanying drawings, wherein:—

Figs. 1 and 2 are cross-sections of the filing mechanism in closed and open position, respectively.

Referring to the accompanying drawings, the mechanism comprises a resilient lip 6 on a baseplate 1, the base plate 1 being attached for instance to the back of a file holder provided on its back with a rail 13 for securing the baseplate by expanding rivets 16, one of which is shown.

Fixed pins 2 for the reception of documents filed are formed on the right hand edge of a baseplate 1, the baseplate 1 being attached for the purpose of improving their rigidity and flexural strength. The left-hand edge of the baseplate 1 is formed with a socket-shaped bearing 4 comprising a bottom portion 5 and the upper lip 6. The portion 5 comprises two mutually inclined adjoining surfaces 7 and 8, whereas the inside surface of the lip 6 is circularly arched. Roughly in the centre of the baseplate is a lipped hole 10. Two grooves 11 and 12 extend along the underside of the outer edges of the baseplate 1. The rail 13 is inserted between two foils 14 and 15. The head of the rivet 16 shown is thrust through the hole 10. Two longitudinal ribs 17 and 18 on the rail 13 press the foil 14 into the grooves 11 and 12 and thus locate the baseplate.

A pivot shaft 19 is supported in the bearing 4. The shaft is of substantially C-shaped cross-section, a recess being formed between faces 20 so that the shaft has resilience in a lateral direction. Moreover the shaft is integrally formed with arcuate pins 26, later referred to. The lip 6 is shown gapped at 3 to permit full movement of the pin 26. When the pin 26 occupies a position in the gap, e.g. as shown in Fig. 1, the lip 6 prevents axial displacement of the shaft 19.

The shortest distance "B" between a flat 21 on the shaft 19 and a plane 22 parallel to the flat 21 and containing the inside edges of the shaft 19 is substantially equal to the width "C" of an opening in the side of the bearing 4. The mechanism is assembled by pushing the shaft 19 sideways i.e. to the right in the drawings, into the bearing 4.

The bottom of the shaft 19 in the position shown in Fig. 1 comprises two relatively inclined flat bearing faces 23 and 24 which are

adapted to co-operate with corresponding faces 7 and 8 of the socket bearing 4 in the closed position shown in Figure 1, whereas in the open position of the mechanism the flat faces 21 and 23 co-operate with the faces 7 and 8 as can be seen in Figure 2. The upper portion of the pivot shaft 19 has a cylindrical bearing face 25 which is resiliently urged against the co-operating rounded bearing face 9 of the resilient lip 6 when the pivot shaft 19 is rotated so that the shaft 19 can be snapped alternately into the closed and open positions, but the internal dimension of the bearing 4 and the diameter of the shaft 19 are such that the shaft is held in those positions. The arcuate pins 26, when in the closed position shown in Fig. 1, meet the fixed arcuate pins 2 in a plane parallel to their abutting ends and passing through a point 27.

The pins 2 and 26, both of which have lateral resilience, exceed in length by amounts "A" and "D" respectively, the lengths that would be required for their ends to abut without pressure when the pins 26 are in the closed position. Thus, when in the closed position, the pins 2 and 26 abut under pressure due to their deflection and resilience, and thereby safeguard against loss of documents filed.

WHAT WE CLAIM IS:—

1. A mechanism for holding holed documents in a file holder, said mechanism being made entirely of plastics and comprising a baseplate carrying a bearing and fixed pins for holding the documents, and movable pins carried on a pivot shaft in the bearing and adapted to co-operate with the respective fixed pins, wherein the bearing and the shaft present co-operating surfaces to each other to locate the shaft alternately in a closed position in which the ends of the movable pins abut upon the ends of the respective fixed pins and an open position in which the movable pins are spaced by withdrawal from the fixed pins, and the bearing is formed so that it holds the shaft in the closed and open positions by resilient pressure.

2. A mechanism according to claim 1, wherein the shaft is located in the closed and open positions by mutually inclined flat surfaces formed on the bearing and which co-operate with surfaces formed on the shaft.

3. A mechanism according to claim 2, wherein the shaft is formed with mutually inclined flat surfaces for co-operation in the closed and open positions with the flat surfaces formed on the bearing.

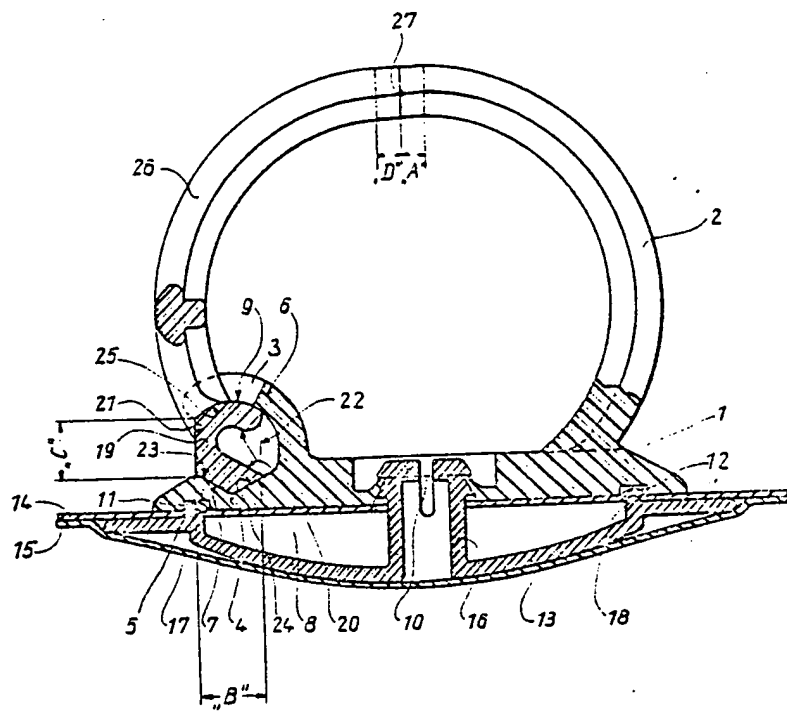
4. A mechanism according to any one of the preceding claims, wherein a portion of the shaft periphery engaging the bearing in the full range of movement therein lies on an arc of a circle.

5. A mechanism according to any one of the preceding claims, wherein the shaft is of a cross-section such that the shaft has resilient in the lateral direction.

6. A mechanism according to claim 5, wherein the cross-section is of substantially C-shape.
- 5 7. A mechanism according to any one of the preceding claims, wherein the respective lengths of the fixed and movable pins are such that, in the closed position, the respective ends abut under pressure.
- 10 8. A mechanism according to any one of the preceding Claims wherein the fixed and movable pins have a T-shaped cross-section for the purpose of increasing their rigidity and flexural strength.
- 15 9. A mechanism according to any one of the preceding Claims wherein the bearing has a lateral opening for the insertion therethrough of the pivot shaft into the bearing, the width of said opening being substantially equal to the shortest distance between parallel planes containing two opposite extremities of the cross-section of the pivot shaft. 20
10. A mechanism according to any one of the preceding Claims wherein the pivot shaft is integrally formed with at least one manipulating lever for opening and closing the file holding pins. 25
11. A mechanism for holding punched documents in a file holder, said mechanism being constructed and arranged substantially as hereinbefore described, with reference to and as illustrated in the accompanying drawings. 30
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Fig. 1



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2 SHEETS

This drawing is a reproduction of
the Original on a reduced scale

Sheets 1 & 2

Fig. 2

